

Claims

I claim:

1. A nonwoven web having elastic properties in the cross-machine direction where said anisotropic precursor web composed of an intimate blend of thermally bonded thermoplastic and nonthermoplastic fibers, said blend containing from 60 to 100% thermoplastic fibers and the remainder nonthermoplastic fibers, said precursor web being continuously drawn within a web heating means by a multiplicity of tension means wherein the heated web is subjected to a variable tension means sufficient to provide a strain rate of at least 3.5 in./in./minute but less than 9.5 in./in./minute, said strain rate calculated based on the apparent gage length between individual elements of said tension means, whereby the resultant web is characterized by a narrowing of its lateral dimension, an increase in its length and the development of a web elasticity of at least 85% recovery after being elongated at least 50% in the direction perpendicular to and in the same plane as the drawing forces, improved softness and improved conformability.
2. The nonwoven web of Claim 1 wherein the thermoplastic fibers are selected from the group including polyolefins, polyesters, polyamides, and their respective copolymers.
3. The nonwoven web of Claim 1 wherein said nonthermoplastic fibers are selected from the group including natural cellulosics, regenerated cellulosics, natural fibers, glass, inorganic fibers or metallic fibers.

4. The web of claim 1 wherein said precursor web is laminated to a thermoplastic elastomeric film.

5. The nonwoven web of Claim 1 where said precursor web is a thermally bonded laminate comprising two or more thermoplastic webs selected from the group including spunbonded nonwovens, meltblown nonwovens, thermally bonded carded nonwovens, thermoplastic foams and thermoplastic films.

6. A nonwoven web having elastic properties in the machine direction where said anisotropic precursor web composed of an intimate blend of thermally bonded thermoplastic and nonthermoplastic fibers, said blend containing from 60 to 100% thermoplastic fibers and the remainder nonthermoplastic fibers, said precursor web being continuously drawn within a heated chamber by a drawing means wherein the heated web is subjected to a tension sufficient to provide a strain rate of at least 3.5 in./in./minute but less than 9.5 in./in./minute said strain rate calculated based on the apparent gage length between individual elements of said tension means, whereby the resultant web is characterized by a narrowing of its lateral dimension, an increase in its length and the development of a web elasticity of at least 80% recovery after being elongated at least 50% in the direction perpendicular to and in the same plane as the drawing forces, improved softness and improved conformability.

7. The nonwoven web of Claim 6 wherein said thermoplastic fibers are selected from the group including polyolefins, polyesters, polyamides, and their respective copolymers.

8. The nonwoven web of Claim 6 where said nonthermoplastic fibers are selected from the group including natural cellulose, regenerated cellulose, natural fibers, glass, inorganic fibers or metallic fibers.

9. The nonwoven web of Claim 6 where the precursor web is a thermally bonded laminate comprising two or more thermoplastic webs selected from the group including spunbonded nonwovens, meltblown nonwovens, thermally bonded carded nonwovens, thermoplastic foams and thermoplastic films.

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